

# PATENT COOPERATION TREATY

10/526679

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

WC → CM

To:

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## NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Rule 71.1)

Date of mailing  
(day/month/year)

14.09.2004

Applicant's or agent's file reference  
21.1105

### IMPORTANT NOTIFICATION

International application No.  
PCT/EP 03/10001

International filing date (day/month/year)  
05.09.2003

Priority date (day/month/year)  
05.09.2002

Applicant  
SERVICES PETROLIERS SCHLUMBERGER et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

#### 4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international  
preliminary examining authority:



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# PATENT COOPERATION TREATY



# PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

|  |  |   |
|--|--|---|
| Applicant's or agent's file reference<br>21.1105   | <b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416) |   |
| International application No.<br>PCT/EP 03/10001   | International filing date ( <i>day/month/year</i> )<br>05.09.2003  | Priority date ( <i>day/month/year</i> )<br>05.09.2002 |
| International Patent Classification (IPC) or both national classification and IPC<br>E21B33/13 |  |   |
| Applicant<br>SERVICES PETROLIERS SCHLUMBERGER et al.   |  |   |

|    |  |
|----|--|
| 1. | This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.   |
| 2. | This REPORT consists of a total of 4 sheets, including this cover sheet.   |
|    | <input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).<br><br>These annexes consist of a total of 1 sheets.  |
| 3. | This report contains indications relating to the following items: <ul style="list-style-type: none"> <li>I <input checked="" type="checkbox"/> Basis of the opinion</li> <li>II <input type="checkbox"/> Priority</li> <li>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</li> <li>IV <input type="checkbox"/> Lack of unity of invention</li> <li>V <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</li> <li>VI <input type="checkbox"/> Certain documents cited</li> <li>VII <input type="checkbox"/> Certain defects in the international application</li> <li>VIII <input type="checkbox"/> Certain observations on the international application</li> </ul> |

|   |  |
|---|--|
| Date of submission of the demand<br><br>29.03.2004  | Date of completion of this report<br><br>14.09.2004  |
| Name and mailing address of the international preliminary examining authority:<br><br> European Patent Office<br>D-80298 Munich<br>Tel. +49 89 2399 - 0 Tx: 523656 epmu d<br>Fax: +49 89 2399 - 4465 | Authorized Officer<br><br>Zimpfer, E<br><br>Telephone No. +49 89 2399-7881 <div style="text-align: right;">  </div> |

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. **PCT/EP 03/10001**

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, Pages**

1-9 as originally filed

**Claims, Numbers**

1-7 received on 03.07.2004 with letter of 01.07.2004

**Drawings, Sheets**

1/4-4/4 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).  
☐ the language of publication of the international application (under Rule 48.3(b)).  
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority in written form.  
☐ furnished subsequently to this Authority in computer readable form.  
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.  
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:  
☐ the claims, Nos.:  
☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. **PCT/EP 03/10001**

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

|                               |             |     |
|-------------------------------|-------------|-----|
| Novelty (N)                   | Yes: Claims | 1-7 |
|                               | No: Claims  |     |
| Inventive step (IS)           | Yes: Claims | 1-7 |
|                               | No: Claims  |     |
| Industrial applicability (IA) | Yes: Claims | 1-7 |
|                               | No: Claims  |     |

2. Citations and explanations

**see separate sheet**

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

Reference is made to the following documents :

**D1:** FR-A-2 784 095 (SCHLUMBERGER CIE DOWELL) 7 April 2000 (2000-04-07)

**1. Amendments :**

- 1.1** The amendments filed with the letter dated 01.07.2004 are allowable considering Article 19(2) PCT.

**2. Novelty :**

- 2.1** Since none of the prior art discloses all the technical features of independent claim 1, said claim as well as dependent claims 2-7 are considered as being novel over the cited prior art documents.

**3. Inventive Step :**

- 3.1 Document D1**, considered as being the closest prior art document, discloses a well cementing composition comprising a base fluid, cement, reinforcing metallic fibers - amorphous cast iron fibers- (see p4 l28 - p5 l11), and particulate caoutchouc material to improve the flexibility of said composition.

The subject-matter of present claim 1 is different in the use of glass, carbon or polymer fibers, in addition to the metallic fibers, instead of caoutchouc particulate.

The technical problem solved by this differentiating features appears to be an increase of the stability of the cement slurry by increasing the sedimentation time, as shown in the present application (see table 3 and pages 5+6 of the present application).

Since none of the prior art document teaches or fairly suggests such a composition comprising these 2 types of fiber or such a technical effect, claim 1, as well as dependent claims 2-7, are considered as being inventive.

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DT01 Rec'd PCT/PT 03 MAR 2005

## CLAIMS

- 1 A cement slurry, comprising a base fluid including cement, a first fibrous component made of metallic fibres and a second fibrous component made of glass, carbon or polymeric fibres having a density close to that of the base fluid, said second fibrous component present at a concentration of less than 10% by mass of the total fibrous content of the fluid.
- 2 The cement slurry of claim 1, wherein the metallic fibres comprise amorphous cast iron.
- 3 The cement slurry of claim 2, wherein the metallic fibres are flat, plate-like structures having an average length less than 10mm.
- 4 The cement slurry as claimed in any preceding claim, wherein the second fibrous component is selected from the list consisting of glass, polyamide, novoloid, polypropylene and polyester fibres.
- 5 A cement slurry as claimed in any preceding claim wherein the second fibrous component has a length ranging from 5 to 35 mm.
- 6 A well fluid as claimed in any preceding claim, wherein the base fluid exhibits shear-thinning behaviour.
- 7 A method of treating a well, comprising pumping into the well a cement slurry as claimed in any of the preceding claims.